



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
ATLANTA FEDERAL CENTER
61 FORSYTH STREET
ATLANTA, GEORGIA 30303-8960

ELECTRONIC MAIL
CONFIRMATION OF RECEIPT EMAIL REQUESTED

Lt. Colonel Scott Carpenter
Commander
Holston Army Ammunition Plant
4509 West Stone Drive
Kingsport, Tennessee 37660-1048
randolph.s.carpenter.mil@mail.mil

SUBJ: Supplemental Request for Information
Holston Army Ammunition Plant, EPA ID No.: TN5210020421

Dear Colonel Carpenter:

The U.S. Environmental Protection Agency has reviewed your April 15, 2020, response to the EPA's February 11, 2020, Information Request and is requesting additional information on the nature and extent of hazardous waste practices at the Holston Army Ammunition Plant in Kingsport, Tennessee (hereafter referred to as Holston or the facility). Based on the information in the April 15, 2020, response and the Holston Resource Conservation and Recovery Act (RCRA) permit, it appears that additional information may be available regarding hazardous waste identification and handling procedures. As such, the EPA has the attached follow-up questions.

Pursuant to Section 3007 of the RCRA, 42 U.S.C. § 6927, Holston is hereby directed to respond, fully and truthfully, within thirty (30) calendar days of receipt of this letter, to the Information Request enclosed herein in Enclosure C subject to the Instructions in Enclosure A and References in Enclosure B. Compliance with this request for information is mandatory, and information provided by Holston may be used by the EPA in future enforcement actions. Failure to respond fully and truthfully to each and every question or the information request within thirty (30) calendar days of receipt of this letter, or to adequately justify such failure to respond, may result in further enforcement action against Holston by the EPA pursuant to Section 3008 of RCRA, 42 U.S.C. § 6928.

Your response to this request for information should be emailed to:

Alan A. Annicella
Chief, Land, Asbestos and Lead Section
Chemical Safety and Land Enforcement Branch
Enforcement and Compliance Assurance Division
U.S. EPA Region 4
61 Forsyth St., SW
Atlanta, Georgia 30303-3104
annicella.alan@epa.gov

The information requested herein must be provided notwithstanding its possible characterization as confidential information or trade secrets. Holston may, if desired, assert a business confidentiality claim covering part or all of the information requested, in the manner described in 40 C.F.R. § 2.203(b), by attaching to such information, at the time it is submitted, a suitable notice employing language such as trade secret or proprietary or company confidential. Information covered by such a claim will be disclosed by the EPA only to the extent and only by means of the procedures set forth in 40 C.F.R. Part 2, Subpart B. If no such claim accompanies the information when it is received by the EPA, it may be made available to the public by the EPA without further notice to Holston. The EPA will construe the failure to furnish a confidentiality claim with your response to this letter as a waiver of that claim. Holston should read the above-cited regulations carefully before asserting a business confidentiality claim, since certain categories of information are not properly the subject of such a claim. Additional information can be found in Enclosure A.

This Information Request is not subject to the approval requirement of the Paper Reduction Act of 1980, 44 U.S.C. § 3501 et seq.

Should you have any questions on this matter, please contact Alan Annicella, of my staff, by phone at (404) 562-8610 or by email at annicella.alan@epa.gov.

Sincerely,

Kimberly L. Bingham
Chief
Chemical Safety and Land Enforcement Branch

Enclosure

cc: Mr. Joseph Kennedy, Holston Army Ammunition Plant (joseph.r.kennedy3.civ@mail.mil)
Mr. Bob Winstead, BAE Systems (bob.winstead@baesystems.com)
Mr. Larry D. Manecke (larry.d.manecke.civ@mail.mil)
Mr. Walter S. King (walter.s.king8.civ@mail.mil)
Mr. Dallas W. Heltz (dallas.w.heltz.civ@mail.mil)
Ms. Lisa Hughey, TDEC Nashville (lisa.hughey@tn.gov)
Mr. Chris Lamb, TDEC Kingsport (chris.lamb@tn.gov)
Ms. Nancy McKee Perez, EPA Region 4 (McKeePerez.Nancy@epa.gov)

ENCLOSURE A

INFORMATION REQUEST

Instructions:

1. Identify the person(s) responding to these Information Requests on behalf of Respondent.
2. A separate response must be made to each of the Information Requests set forth herein.
3. Precede each answer with the number of the Information Request to which it corresponds.
4. In answering each Information Request question, identify all documents and persons consulted, examined, or referred to in the preparation of each response and provide true and accurate copies of all such documents.
5. If information is not known or not available to you as of the date of submission of a response to this Information Request and should later become known or available to you, you must supplement your response to the EPA. Moreover, should you find at any time after the submission of the response that any portion of the submitted information is false or misrepresents the truth; you must notify the EPA thereof as soon as possible.
6. For each document produced in response to this Information Request, indicate on the document, or in some other reasonable manner, the number of the question to which it responds.
7. Where specific information has not been memorialized in a document, but is nonetheless responsive to the Request, you must respond to the question with a written response.
8. If information responsive to this Information Request is not in your possession, custody or control, then identify the person from whom such information may be obtained.
9. If you have reason to believe that there may be persons able to provide a detailed or complete response to any Information Request question or who may be able to provide additional responsive documents, identify such persons and the additional information or documents that they may have.
10. The information requested herein must be provided even though the Respondent may contend that it includes possibly confidential information or trade secrets. You may, if you desire, assert a confidentiality claim covering part or all of the information requested, pursuant to Section 3007(b) of RCRA, 42 U.S.C. Section 6927(b), Sections 104(e)(7)(E) and (F) of CERCLA, 42 U.S.C. Sections 9604(e)(7)(E) and (F), and 40 C.F.R. Section 2.203(b), by attaching to such information at the time it is submitted, a cover sheet, stamped or typed legend, or other suitable form of notice employing language such as trade secret, or proprietary, or company confidential. Information covered by such a claim will be disclosed by the EPA only to the extent, and only by means, of the procedures set forth in statutes and regulation set forth above. If no such claim accompanies the information when it is received by the EPA, it may be made available to the public by the EPA without further notice to you. You should read the above cited regulations carefully before asserting a business confidentiality claim, since certain categories of information are not properly the subject of such a claim.

ENCLOSURE B

REFERENCES

While Holston remains subject to state rules and regulations, for ease of discussion the federal regulations are presented here:

40 C.F.R. § 261.23 Characteristic of reactivity (<https://www.law.cornell.edu/cfr/text/40/261.23>)

(a) A solid waste exhibits the characteristic of reactivity if a representative sample of the waste has any of the following properties:

- (1) It is normally unstable and readily undergoes violent change without detonating.
- (2) It reacts violently with water.
- (3) It forms potentially explosive mixtures with water.
- (4) When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.
- (5) It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.
- (6) It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.
- (7) It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.
- (8) It is a forbidden explosive as defined in 49 C.F.R. § 173.54, or is a Division 1.1, 1.2 or 1.3 explosive as defined in 49 C.F.R. §§ 173.50 and 173.53.

49 C.F.R. § 173.50 (<https://www.law.cornell.edu/cfr/text/49/173.50>)

Class 1 - Definitions.

(a) Explosive. For the purposes of this subchapter, an explosive means any substance or article, including a device, which is designed to function by explosion (i.e., an extremely rapid release of gas and heat) or which, by chemical reaction within itself, is able to function in a similar manner even if not designed to function by explosion, unless the substance or article is otherwise classed under the provisions of this subchapter. The term includes a pyrotechnic substance or article, unless the substance or article is otherwise classed under the provisions of this subchapter.

(b) Explosives in Class 1 are divided into six divisions as follows:

- (1) Division 1.1 consists of explosives that have a mass explosion hazard. A mass explosion is one which affects almost the entire load instantaneously.
- (2) Division 1.2 consists of explosives that have a projection hazard but not a mass explosion hazard.
- (3) Division 1.3 consists of explosives that have a fire hazard and either a minor blast hazard or a minor projection hazard or both, but not a mass explosion hazard.
- (4) Division 1.4 consists of explosives that present a minor explosion hazard. The explosive effects are largely confined to the package and no projection of fragments of appreciable size or range is to be expected. An external fire must not cause virtually instantaneous explosion of almost the entire contents of the package.
- (5) Division 1.5 consists of very insensitive explosives. This division is comprised of substances which have a mass explosion hazard but are so insensitive that there is very little probability of initiation or of transition from burning to detonation under normal conditions of transport.

Footnote for Division 1.5: The probability of transition from burning to detonation is greater when large quantities are transported in a vessel.

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(6) Division 1.6 consists of extremely insensitive articles that do not have a mass explosion hazard. This division is comprised of articles which predominately contain extremely insensitive substances and that demonstrate a negligible probability of accidental initiation or propagation.

Footnote for Division 1.6: The risk from articles of Division 1.6 is limited to the explosion of a single article.

49 C.F.R. § 173.53 (<https://www.law.cornell.edu/cfr/text/49/173.53>)

Provisions for using old classifications of explosives.

Where the classification system in effect prior to January 1, 1991, is referenced in State or local laws, ordinances or regulations not pertaining to the transportation of hazardous materials, the following table may be used to compare old and new hazard class names:

Current classification	Class name prior to Jan. 1, 1991
Division 1.1	Class A explosives.
Division 1.2	Class A or Class B explosives.
Division 1.3	Class B explosive.
Division 1.4	Class C explosives.
Division 1.5	Blasting agents.
Division 1.6	No applicable hazard class.

49 C.F.R. § 173.54 (<https://www.law.cornell.edu/cfr/text/49/173.54>)

Forbidden explosives

Unless otherwise provided in this subchapter, the following explosives shall not be offered for transportation or transported:

- (a) An explosive that has not been approved in accordance with 49 C.F.R. § 173.56 of this subpart.
- (b) An explosive mixture or device containing a chlorate and also containing:
 - (1) An ammonium salt, including a substituted ammonium or quaternary ammonium salt; or
 - (2) An acidic substance, including a salt of a weak base and a strong acid.
- (c) A leaking or damaged package or article containing an explosive.
- (d) Propellants that are unstable, condemned or deteriorated.
- (e) Nitroglycerin, diethylene glycol dinitrate, or any other liquid explosives not specifically authorized by this subchapter.
- (f) A loaded firearm (except as provided in 49 C.F.R. § 1544.219).
- (g) Fireworks that combine an explosive and a detonator.
- (h) Fireworks containing yellow or white phosphorus.
- (i) A toy torpedo, the maximum outside dimension of which exceeds 23 mm (0.906 inch), or a toy torpedo containing a mixture of potassium chlorate, black antimony (antimony sulfide), and sulfur, if the weight of the explosive material in the device exceeds 0.26 g (0.01 ounce).
- (j) Explosives specifically forbidden in the C.F.R. § 172.101 table of this subchapter.
- (k) Explosives not meeting the acceptance criteria specified in C.F.R. § 173.57 of this subchapter.
- (l) An explosive article with its means of initiation or ignition installed, unless approved in accordance with 49 C.F.R. § 173.56.

49 C.F.R. § 173.56 (<https://www.law.cornell.edu/cfr/text/49/173.56>)

New explosives - definition and procedures for classification and approval.

(a) Definition of new explosive. For the purposes of this subchapter a new explosive means an explosive produced by a person who:

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- (1) Has not previously produced that explosive; or
- (2) Has previously produced that explosive but has made a change in the formulation, design or process so as to alter any of the properties of the explosive. An explosive will not be considered a “new explosive” if an agency listed in paragraph (b) of this section has determined, and confirmed in writing to the Associate Administrator, that there are no significant differences in hazard characteristics from the explosive previously approved.

Definitions from DoDI 4140.62 September 2019

(<https://www.esd.whs.mil/Portals/54/Documents/DD/issuances/dodi/414062p.pdf?ver=2019-09-09-095355-877>)

MPPEH – material potentially presenting an explosive hazard

MDAS – material documented as safe

MDEH – material documented to be an explosive hazard

“MPPEH. Material owned or controlled by the DoD that, before determination of its explosives safety status, potentially contains explosives or munitions (e.g., munitions containers and packaging material; munitions debris remaining after munitions use, demilitarization, or disposal; and range-related debris) or potentially contains a high enough concentration of explosives that the material presents an explosive hazard (e.g., equipment, drainage systems, holding tanks, piping, or ventilation ducts that were associated with munitions production, demilitarization, or disposal operations). Excluded from MPPEH are: Military munitions and military munitions-related materials, including wholly inert components (e.g., fins, launch tubes, containers, packaging material), that are to be used or reused for their intended purpose and are within a DoD Component-established munitions management system. Non-munitions-related material (e.g., horseshoes, rebar, other solid objects) and munitions debris that are solid metal fragments that do not realistically present an explosive hazard Other items (e.g., gasoline cans, compressed gas cylinders) that are not munitions or munitions-related material but may present an explosion hazard.”

“MDAS. MPPEH that has been assessed and documented as not presenting an explosive hazard and for which the chain of custody has been established and maintained. This material is no longer considered to be MPPEH.”

“MDEH. MPPEH that cannot be documented as MDAS, that has been assessed and documented as to the maximum explosive hazards the material is known or suspected to present, and for which the chain of custody has been established and maintained. This material is no longer considered to be MPPEH”

ENCLOSURE C
INFORMATION REQUEST

Request 1:

Which of the following explosives found in 49 C.F.R. § 173 as referenced in 40 C.F.R. § 261.23 are handled by Holston? Please provide a list that identifies each material that is an explosive per 49 C.F.R. § 173 and a safety data sheet for each material.

- A new explosive as defined in 49 C.F.R. § 173.56.
- An explosive that has not been approved in accordance with 49 C.F.R. § 173.56.
- An explosive mixture or device containing a chlorate and also containing an ammonium salt, including a substituted ammonium or quaternary ammonium salt.
- An explosive mixture or device containing a chlorate and also containing an acidic substance, including a salt of a weak base and a strong acid.
- A leaking or damaged package or article containing an explosive.
- Propellants that are unstable, condemned or deteriorated.
- Nitroglycerin, diethylene glycol dinitrate, or any other liquid explosives.
- A loaded firearm.
- Fireworks that combine an explosive and a detonator.
- Fireworks containing yellow or white phosphorus.
- A toy torpedo, the maximum outside dimension of which exceeds 23 mm (0.906 inch), or a toy torpedo containing a mixture of potassium chlorate, black antimony (antimony sulfide), and sulfur, if the weight of the explosive material in the device exceeds 0.26 g (0.01 ounce).
- Explosives specifically forbidden in 49 C.F.R. § 172.101.
- Explosives not meeting the acceptance criteria specified in 49 C.F.R. § 173.57.
- An explosive article with its means of initiation or ignition installed.
- A Division 1.1 Class A explosive.
- A Division 1.2 Class A or Class B explosive.
- A Division 1.3 Class B explosive.
- A Division 1.1 explosive.
- A Division 1.2 explosive.
- A Division 1.3 explosive.

Request 2:

Does Holston handle any materials that when they become a solid waste would exhibit any of the following characteristics of reactivity found in 40 C.F.R. § 261.23? If yes, please provide a list that identifies each material and a safety data sheet for each material.

- It is normally unstable and readily undergoes violent change without detonating.
- It reacts violently with water.
- It forms potentially explosive mixtures with water.
- When mixed with water, it generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.
- It is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, can generate toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment.
- It is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.
- It is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

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Request 3:

For Requests 1 and 2, are any of the identified materials part of any waste stream that is MPPEH that is burned in a burn pile or burn cage?

Request 4:

- What training have the personnel who determine and document the explosives safety status of material as MDEH or MDAS had to be able to handle solid waste, including making hazardous waste determinations on solid waste, in accordance with applicable federal or State hazardous material and hazardous waste regulations? Please be specific to the training provided regarding hazardous waste regulations.
- Please provide the position description(s) and the training provided to each individual in the position(s) that make the hazardous waste determinations.

Request 5:

- Which MPPEH are managed as “waste military munitions” pursuant to 40 C.F.R. § 266 Subpart M?
- Which “waste military munitions” are identified as MDEH?
- Which “waste military munitions” are identified as MDAS?
- Please identify the final disposition of the “waste military munitions” and provide all documents related to its generation, accumulation and final disposition.
- Please state how the waste is accumulated on-site prior to its final disposition.

Request 6:

- In the past three years, have any MDAS ever been found to be an explosive hazard?
- Please indicate the final disposition of the waste in each incident.

Request 7:

For waste streams identified in your April 15, 2020, response letter, Appendix B, the following terms were used or statements were made. Please explain or provide more information for each:

- What is a “*limited area*” or “*Limited Area*”?
- Please explain what the following means: “*Current screening procedures eliminate the allowance of grossly explosives contaminated materials from being added to the cages or piles.*”
 - What is “*grossly explosives contaminated materials*”?
- What is meant by “*similarly described as Division 1.4 hazard class—substances and articles which present only a small hazard in the event of ignition or initiation.*”
 - Note: Division 1.4 does not use the word “small”.
 - Please explain what Holston means by “*small*.”
 - How does Holston determine “similarly” used in this statement? Please provide all supporting information and documentation.
- What is meant by “*An external fire shall not cause virtually instantaneous explosion of almost the entire contents of the package.*”
 - How is this determined?

Background for Request 8:

For each waste stream identified in your April 15, 2020, response letter, Appendix B states that the waste streams are a composition of many different items that seem likely to have been generated at multiple points. The following is the list of waste streams found in the April 15, 2020, response letter:

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1. Solid Waste Stream #1 - Concrete and Masonry from Limited Area (Concrete from the aprons and foundations and masonry material from explosive production buildings)
2. Solid Waste Stream #2 - Fiber drums and Cardboard from the limited area (Empty fiber drums that were used to store raw materials including explosives and cardboard used in explosives buildings)
3. Solid Waste Stream #3 - Metal from the Limited Area (Can include any metal used in an explosives production building. This includes process piping, conduit, motors, pumps, wire, vessels, etc.)
4. Solid Waste Stream #4 - Personal Protective Equipment (PPE) from Limited Area (Respirators, gloves, Tyvek suits, hats, safety glasses, boots, coveralls)
5. Solid Waste Stream #5 – Wood (Pallets, building material, non-chemical treated wood)
6. Solid Waste Stream #6 – Soil (Soil from the limited area)
7. Solid Waste Stream #7 – Plastic (Drum liners, nutsche cover liners, etc.)
8. Solid Waste Stream #8 – Explosives Contamination Oil (Oil removed from machinery, pumps, motors, elevators used in explosives production buildings)
9. Solid Waste Stream #9 – General Explosives Manufacturing Waste (Filters, probe socks, cloth nutsche covers and etc.)

Request 8:

For each waste stream identified in your April 15, 2020, response letter, Appendix B, state whether the hazardous waste determination presented in Appendix B has been made based on:

- The composition of many different items, (i.e. all items as a single waste stream), or
- Each individual item of the waste stream at the point it is generated.

Request 9:

For each waste stream identified in your April 15, 2020, response letter, Appendix B, please provide the following information:

- What explosives or munitions or what concentration of explosives is in the material that presents an explosive hazard that caused them to be a MPPEH? Is that determination based on an analysis of an individual item in the waste stream or the composite waste stream?
- Provide the Hazard Classification(s) of each found in DESR 6055.09. (Page 35 <https://denix.osd.mil/ddes/home/home-documents/desr-6055-09-edition-1/>)
- Please explain the “screening process” that is referenced in your April 15, 2020, response letter and how it is used to support the waste determination.
- Has Holston analyzed each waste stream for underlying hazardous constituents including, but not limited to nitroaromatics, nitrosamines, nitrocellulose, nitroguanidines or ammonium picrate? Please provide supporting records for each analysis.

Background for Request 10:

In your April 15, 2020, response letter item number 8 you state:

“Ash from cage burns is placed on the pile after each cage burn for additional thermal decontamination.”

Request 10:

- Has a hazardous waste determination been conducted on the burn cage ash, a newly generated solid waste, prior to additional thermal decontamination? Please provide all analytical test results and supporting documentation for the waste determination.

ENCLOSURE C

- If you did a hazardous waste determination, has Holston analyzed the burn cage ash prior to additional thermal decontamination for underlying hazardous constituents including, but not limited to nitroaromatics, nitrosamines, nitrocellulose, nitroguanidines, or any other constituents that are components of an explosive? Please provide supporting records for each analysis.

Background for Request 11:

In your April 15, 2020, response letter item number 8 you state:

“The cage burn itself does not meet the time requirements for thermal decontamination.”

Request 11:

- What is the goal of the additional thermal decontamination of the solid waste?
- How does Holston know when thermal decontamination is complete?

Request 12:

- What hazardous waste code(s) apply to the hazardous waste burned in the RCRA permitted Subpart X unit?
- For the explosive solids that have been determined to be hazardous waste, including, but not limited to those determined to be a D003, D030, and/or K044 hazardous waste, provide a detailed description identifying 100 percent of the chemical composition and percentage of each chemical component.
- For the explosive solids that have been determined to be a hazardous waste, provide a detailed description identifying 100 percent of the material composition and percentage of each material component.
- Pursuant to Permit Subsection II.K.1.(c) Recordkeeping and Reporting, please provide all records and results of waste analyses and waste determinations performed as specified in Permit Subsections II.C, II.G, II.O, II.P, II.Q, and II.R, as well as Section III.K.1(k), from 2017 to the present. Please include all waste analysis records, including all sampling data and laboratory testing data.